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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,737	09/15/2003	Kinshiro Takadate	9281-4637	1322
7590 12/29/2004				
Brinks Hofer Gilson & Lione		EXAMINER		
P.O. Box 10395		JONES, STEPHEN E		
Chicago, IL 60610				
		ART UNIT	PAPER NUMBER	
		2817		

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/662,737	TAKADATE ET AL.	
	Examiner	Art Unit	
	Stephen E. Jones	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 and 17 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 8, 10, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 4, 7, 9 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/15/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

The restriction requirement is deemed moot since all of the remaining claims read on the elected invention.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Knerr.

Knerr teaches a circulator (i.e. a nonreciprocal device) including: a magnetic substrate plate (14); center conductors are on the top surface and have via conductors 15 to a common electrode on the bottom surface (e.g. see Fig. 2); the conductors cross at an angle (inherently predetermined) (Claim 1); and the ends of the conductors are at the edge of the side and form terminals (Claim 5).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knerr.

Knerr teaches a nonreciprocal device as described above. However, Knerr does not explicitly teach that a terminating resistor is connected to one center conductor.

It would have been considered obvious and routine to one of ordinary skill in the art to have connected a resistor to the end of one of the conductors, because connecting a resistor to an unused terminal of a nonreciprocal device is well-known for forming an isolator instead of a circulator.

6. Claims 2-3, 6, 8, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (US 6,472,960) in combination with Knerr.

Ishikawa (Figs. 8-9) teaches a nonreciprocal device including: a magnetic plate having conductors and capacitors (21) (Claim 3), and a common electrode on the side associated with the bottom of the magnetic substrate; terminals are at the side edges; the conductors are spaced by insulating layers; and the magnetic substrate is closely fit to the interior of the case (Claim 2) (e.g. see Fig. 8); and the device can be considered

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laminated since it is formed of tightly overlying layers (Claim 8). Also, note that the product by process limitation of printing in Claim 6 is not given any patentable weight since only the final product structure is patentable in an apparatus claim.

However, Ishikawa does not teach that the ends of the conductors connected to the common electrode are connected by vias (Claims 18-19),

Knerr provides the exemplary teaching of connecting the common ends of the conductors through vias in the magnetic substrate to the common electrode of a nonreciprocal device.

It would have been considered obvious to one of ordinary skill in the art to have used vias through the magnetic substrate such as taught by Knerr instead of wrapping the conductors around the edge of the Ishikawa substrate, because it would have provided a well-known art-recognized equivalent means for connecting the common ends of the conductors in a nonreciprocal device to a common electrode on the opposing surface.

#### ***Allowable Subject Matter***

7. Claims 4, 7, 9, and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 16-17 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter:

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The prior art of record does not teach the invention of Claims 16-17 including an insulating spacer having solder plating layers laminated over the magnetic plate such that the solder plating layers are opposed to the first ends of the center electrodes, and the solder plating layers electrically connect the first ends of the center conductors to the capacitors and the terminal electrodes.

### **Conclusion**

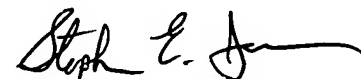
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoneda teaches a nonreciprocal circuit device having a yoke (i.e. a magnetic casing).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**STEPHEN E. JONES**  
**PRIMARY EXAMINER**

SEJ